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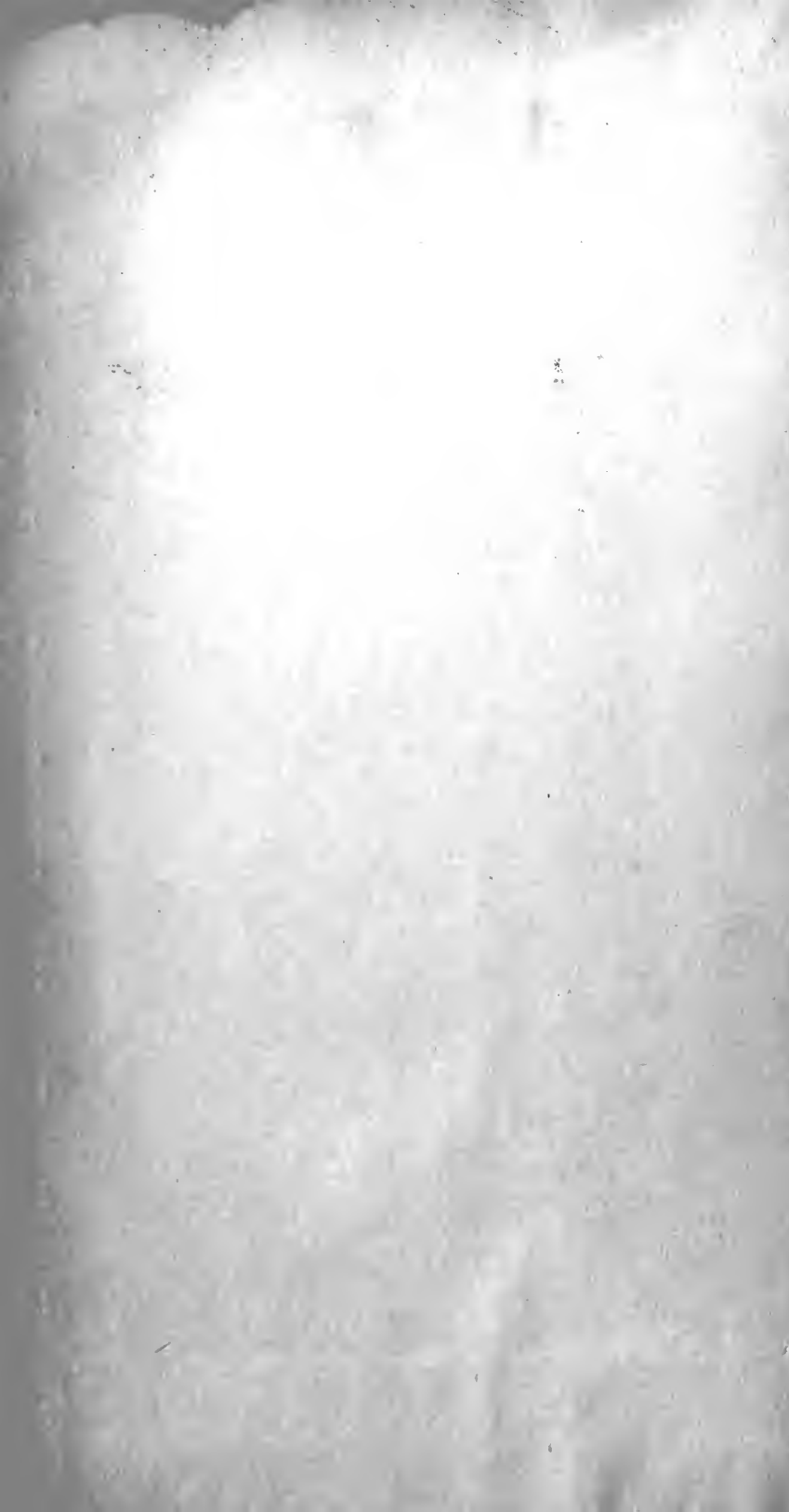
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PHYSIOLOGY IN OUR PUBLIC SCHOOLS.

BY ALBERT LEFFINGWELL, M. D.

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The AMERICAN HUMANE ASSOCIATION has recently issued a circular calling the attention of the public to those methods of instruction in our public schools whereby the facts of physiology are set forth by means of actual experimentation upon living creatures, or by the dissection of such animals, killed for that purpose only, and often in the presence of the pupils themselves. The statement that any such practice really existed, met at first with general incredulity. Even if vivisection were rarely done, it seemed improbable that children of public school age should be required to become familiar with the process of mutilation and the phenomena of death.

The practice, we now know, has been actually introduced in certain schools. In one sense the motive was right enough. No doctrine has been more sedulously inculcated during the past twenty years than that the basis of all knowledge is observation and experiment. To accept any statement on another's testimony, when you can see it for yourself, is considered a sort of treason to the modern scientific spirit. No one thinks of teaching the phenomena pertaining to heat and light, to electricity and gravitation, for example, without illustration by some simple experiments. "Why, then," asks the enthusiastic young teacher, "should not all that varied phenomena of Life and Death which pertains to physiology be taught to young pupils in the same scientific way?"

There are two strong reasons why such methods of teaching should be strenuously prohibited in every school.

1st, Because of the danger of such instruction.

2nd, Because everything needful or desirable to be imparted to the young may be clearly and adequately taught without ever once drawing near to the line of danger, or demanding the sacrifice of life.

"Danger!" I can fancy the surprise, mixed with incredulity, with which a young science-teacher repeats the word. "What danger can there possibly be in the killing and immediate dissection before my pupils of any living creature? I do not *vivisect* animals, but only *dissect* them."

Permit an old teacher to tell you of this danger about which you are sceptical.

Among men of science, the study of the mental and physical peculiarities of young children has excited, during recent years, no little interest. It has been discovered that if we take the pupils of any large public school and study them carefully as individuals,—physically, mentally and morally,—we shall find in each class *a certain proportion below the normal standard*. The sight may be imperfect, the hearing may be less acute; there are malformations of body, or confusion of colors; of all these defects a certain number will be found in every class-room. Test the mental capacity. Every teacher knows that in scores of cases the bright pupil is not over-diligent or the dull scholar blame-worthy for his stupidity; that in quickness of perception, ability to grasp and comprehend, tenacity of memory, some scholars will be far above the average; while on the other hand, some will be found abnormally below it, dull of apprehension, quickly forgetful, difficult to arouse, or to interest in any mental work. A step or two below the mental state of some pupil,—and the teacher admits that the border-line of simplicity or semi-idiotcy would be nearly reached.

The difference in moral sensibility among the young is found to be equally well marked. No two pupils have precisely the same repugnance to wrong-doing in any direction, or manifest the same sense of honor and love of truth, the same hatred of cruelty, or the same tendency to sympathy. Just as a certain proportion of children are below the average in physical development or mental capacity, so, too, a definite proportion *are imperfectly developed morally*; and in many cases need but slight excitement to have aroused within them impulses to cruelty, vice and crime. They are “*psychopathics*,” a term which Prof. James of Harvard University employs to denote an inborn aptitude to immoral actions in any direction. This aptitude may not be always awakened; doubtless in many cases, by education and continual normal environment it is gradually outgrown; but if it be once fairly aroused,—so that a sense of gratification is incited by wrong-doing, there are no excesses of cruelty and crime to which these psychopathic children,—these moral imbeciles,—may not go. And curiously enough, *it is very often in the direction of cruelty—the infliction of pain—that the first incitement is directed*.

Now before a class of pupils in a public school, suppose you illustrate the lesson by dissection of a rabbit or a cat, killed at that time and for that purpose. It is possible that the majority of students might have their attention fixed only upon the facts of anatomy thus illustrated. But to some others,—children quite as likely as otherwise to have been most carefully trained, and to be the objects of most tender solicitude,—*there will come slowly*

creeping into consciousness a vague, abnormal, horrible sense of satisfaction at the sight of this quivering flesh, yet ruddy with the warm blood of out-gone life. Which are the pupils that experience this arousing emotion? Will they confess it to you? Not at all. Yet they may be nearest and dearest to you by every human tie! It is you who have put them to a danger from which they should have been spared. *You* have aroused within them a sensation that is oftentimes the very mother of every cruelty. For out of this awakened sensation of abnormal pleasure at the sight of blood is born the instinct of murder, and the lowest tendencies of viciousness and crime.

There is yet another aspect of these methods of instruction—their influence upon all children who are entirely normal, but yet exceedingly sensitive to impressions. I do not hesitate to say that nothing such a child will learn by these lessons can ever compensate for the deleterious impression it may receive by the needless sacrifice of Life in its presence. Say what we will, there is a kind of moral deterioration inseparable from the act of killing anything which is doing us no harm. To put out of existence a noxious animal or insect is to obey the instinct of self-preservation; but to take a perfectly harmless creature, kin to the pet of many a child, and to deprive it of whatever joys come from living—simply that children may see how curiously Nature has constructed it—can hardly fail to give them a sense of wrongful complicity with deprivation of another's rights. Not long since I was talking with a young girl graduate of the principal female college in this country, and although she was greatly interested in the study of biology, she told me that a most distasteful impression was created among the girl-students by the fact that so many rabbits were killed to demonstrate what the sacrifice of a single life would have done equally well. Is it wise to blunt this sensibility regarding the sacredness of life? I am not referring to the psychopathic child, but to all children alike. There will come a time when, as young men and women, they should know how to prevent pain, by causing the painless termination of life; but for childhood, that lesson should be unlearned, and as far as possible delayed. The beauty, the grace, the excellence of all harmless living things is the lesson for children, rather than precocious intimacy with the mystery of Death.

Then too, there is yet another danger. The desire, the ambition to *imitate* is one of the first instincts of conscious life. I question whether there was ever experiment in class-room that some child or children did not try to imitate it in private or by themselves. Suppose it is merely a dissection of a rabbit just killed. Some child or children will wish to repeat it—and *kill the rabbit themselves*.


Then you have initiated childhood into *private vivisection*. Is that advisable? Admit that you caution your class against such repetitions. But you cannot easily convince an inquiring mind that what it is right for the teacher to do in public may not also be copied in the privacy of his own room, and in the presence of his classmates.

“But is not dissection of recently killed animals absolutely necessary to a right understanding of the text-book?”

Not at all. Such methods of instruction are not only dangerous, *but wholly unnecessary*.

What is the purpose of lessons in school-physiology? Is it to start boys and girls on the road to a medical school? Certainly not. The one great object—in fact the only practical object—is simply to enforce on the minds of the pupils the lessons of Hygiene. What are the plain rules for the preservation of health? What are the effects which may arise from use of tobacco, especially by the young? Wherein lies the danger of alcoholic stimulants? What injury to health comes from over-eating, from improper food, from bad ventilation, from constriction of the body by unhygienic dress? How do people ignorantly injure their digestion, their breathing capacity, the heart, the brain? How may typhoid fever be prevented? How does a community help to stamp out scarlet fever, diphtheria, measles, small-pox, and other epidemic diseases? What shall one do in case of an accident, till the doctor comes? These are the lessons of practical hygiene which school children should be thoroughly taught. They are the lessons which instruction in physiology in schools was designed to impart, and the importance of which cannot be over-estimated. But surely it needs no killing of rabbits, cats or dogs, to make such lessons plain. Everything needful may be illustrated by colored charts and manikins. A quickly forgotten smattering of anatomy may indeed be learned by a child dabbling its fingers in bloody tissues, but nothing which might not be better learned by other methods, without the danger of moral perversion, and at the cost of not a single pang.

Dangerous and unnecessary. These are the words which, in the august name of Science herself, may we not stamp upon all methods of instruction in our public schools which make for the brutalization of childhood by inducing early familiarity with the sacrifice of Life



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